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Matsumura

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[54] **FINGERPRINT ID SYSTEM AND METHOD**

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[52] **U.S. Cl.** **382/125**; 382/124; 382/127

[58] **Field of Search** 382/4, 5, 26, 124, 382/125, 127, 209

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[57] **ABSTRACT**

A fingerprint ID system, which compares input fingerprint image data with registered data, with a digital signal processor exclusive for image processing use, indpendently of a central processing unit comprises: a device for scanning the input fingerprint image data for determining the thinning thereof and for extracting minutiae therefrom; a circuit for removing a pseudo minutia from the extracted minutiae; a circuit for registering the minutiae based on positions of branch points and their positional relationships; a circuit for scoring the mismatching degree between branch points in said fingerprint image data and the registered data on the basis of the norm and for judging the examinee to be the person of said registered data when the mean mismatching degree of the branch point of the minimum mimatching degee is under a predetermined value. When the recognition rate based on minutiae of a fingerprint is low, template matching data is registered and template matching of the input fingerprint image data against the registered data takes place.

9 Claims, 22 Drawing Sheets